

REMARKS

The present Amendment amends claims 1 and 5, leaves claims 2, 4, 6-8 and 11 unchanged and cancels claim 3. Therefore, the present application has pending claims 1, 2, 4-8 and 11.

Claims 1-4, 7 and 8 stand rejected under 35 USC §102(e) as being anticipated by Timpanaro-Perrotta (U.S. Patent Application Publication No. 2003/0177324 A1). As indicated above, claim 3 was canceled. Therefore, this rejection with respect to claim 3 is rendered moot. This rejection with respect to the remaining claims is traversed for the following reasons. Applicants submit that the features of the present invention as now recited in claims 1, 2, 4, 7 and 8 are not taught or suggested by Timpanaro-Perrotta whether taken individually or in combination with any of the other references of record. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Amendments were made to the claims to more clearly describe features of the present invention. Particularly, amendments were made to the claims to more clearly recite that the present invention is directed to a computer system including first storage apparatus located at a first site and a second storage apparatus located at a second site, which is operatively connected to the first site via a network.

According to the present invention, the first storage apparatus is configured to sort data stored in a first storage apparatus into groups which are assigned a priority level and to transfer the sorted data to the second storage apparatus according to the priority levels.

Further, according to the present invention, when a failure occurs in the first storage apparatus, the second storage apparatus transfers the sorted data stored therein, in an order according to the priority levels assigned to the groups to the first storage apparatus to recover the first storage apparatus such that sorted data having a highest priority level is transferred from the second storage apparatus to the first storage apparatus first.

Still further, according to the present invention sorted data having the highest priority level is transferred from the first storage apparatus to the second storage apparatus using synchronous remote copy, and sorted data having a priority level other than the highest priority level is transferred from the first storage apparatus to the second storage apparatus using asynchronous remote copy. These features of the present invention now recited in the claims are described, for example, in the second full paragraph on page 14 of the originally filed specification. This portion of the specification describes that data of a group for which a priority is zero (the highest priority level) is transferred by synchronous remote copy and data of a group for which a data priority is other zero is transferred by asynchronous remote copy.

The above described features of the present invention provide unique advantages being that data of the highest priority level is transferred using synchronous remote copy so that the highest priority data is immediately backed up in the secondary site. By having data of the highest priority level being immediately backed up to the secondary site it allows for immediate recovery of the first site which is unable to operate if the highest priority level data has not been backed up and immediately available.

The above described features of the present invention as now more clearly recited in the claims are not taught or suggested by any of the references of record whether taken individually or in combination with each other. Particularly, the above described features of the present invention are not taught or suggested by Timpanaro-Perrotta whether said reference is taken individually or in combination with any of the other references of record.

Timpanaro-Perrotta teaches a system for maintaining a backup copy of files in a primary storage device in a backup storage device wherein priority values are maintained and associated with each of the files prior to said files being transferred from the primary site and stored in the backup storage device. Timpanaro-Perrotta teaches that the associated priority values may be used to optimize the retrieval of data from the backup storage device such that files having a high priority value can be transferred first, whereas files of a lower priority value can be transferred later.

However, at no point is there any teaching or suggestion in Timpanaro-Perrotta of the copy mechanism being used for storing backup data which has been transferred from the primary site to the secondary site as in the present invention as recited in the claims.

As well understood by those of ordinary skill in the art there are two types of copy procedures that can be used between different storage devices. The first is the synchronous remote copy procedure and the second is the asynchronous remote copy procedure. A discussion of the differences between such procedures can be found in the present application beginning on page 2, line 18 through page 3, line 10.

At no point is there any teaching or suggestion in Timpanaro-Perrotta that a different copy procedure is used when copying high priority data from the first storage apparatus to the second storage apparatus as opposed to the copy procedure used to transfer low priority data from the first storage apparatus to the second storage apparatus as in the present invention.

Thus, Timpanaro-Perrotta fails to teach or suggest that sorted data having the highest priority level is transferred from the first storage apparatus to the second storage apparatus using synchronous remote copy and sorted data having a priority level other than the highest priority level is transferred from the first storage apparatus to the second storage apparatus using asynchronous remote copy as recited in the claims.

Therefore, Timpanaro-Perrotta fails to teach or suggest the features of the present invention as recited in the claims and as such does not anticipate nor render obvious the claimed invention. Accordingly, reconsideration and withdrawal of the 35 USC §102(e) rejection of claims 1, 2, 4, 7 and 8 as being anticipated by Timpanaro-Perrotta is respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references utilized in the rejection of claims 1, 3-5, 7, 8 and 11.

Applicants acknowledge the Examiner's indication in the Office Action that claims 6 and 11 are allowed. Also, Applicants acknowledge the Examiner's indication in the Office Action that claim 5 would be allowable if rewritten or amended to include all the limitations of the base claim and any intervening claims. Amendments were made to claim 5 to place it in independent form including all the limitations of the base claim and any

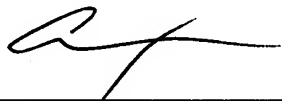
intervening claims. Therefore, claim 5 is allowable as indicated by the Examiner.

In view of the foregoing amendments and remarks, applicants submit that claims 1, 2, 4-8 and 11 are in condition for allowance. Accordingly, early allowance of claims 1, 2, 4-8 and 11 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (TMI-5038).

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.



Carl I. Brundidge
Registration No. 29,621

CIB/jdc
(703) 684-1120